WHAT IS CLAIMED IS

1. A method for induction of anti-tumor immunity in a mammal comprising administering to said mammal an effective amount of at least one immunogen selected from the group consisting of:

(i) a peptide based on a CDR of the heavy or light chain of an anti-p53 mAb, which peptide is capable of eliciting antibodies to p53; and

(ii) a DNA molecule coding for the variable (V) region of an anti-p53 mAb in a suitable gene delivery vehicle.

2. A method for activating an enhanced immune response to p53 in a mammal comprising immunizing said mammal with an effective amount of at least one immunogen selected from the group consisting of:

(i) a peptide based on a CDR of the heavy or light chain of an anti-p53 mAb, which peptide is capable of eliciting antibodies to p53; and

(ii) a DNA molecule coding for the variable (V) region of an anti-p53 mAb in a suitable gene delivery vehicle.

3. A method for induction of immune responses to mutated and wild-type forms of p53 in a mammal comprising

immunization of said mammal with an effective amount of at least one immunogen selected from the group consisting of:

(i) a peptide based on a CDR of the heavy or light chain of an anti-p53 mAb, which peptide is capable of eliciting antibodies to p53; and

(ii) a DNA molecule coding for the variable (V) region of an anti-p53 mAb in a suitable gene delivery vehicle.

4. The method according to claim 1, wherein the peptide based on a CDR of the heavy or light chain of an anti-p53 mAb contains a sequence of the CDR2 or CDR3 of the heavy chain, or of the CDR3 of the light chain, of an anti-p53 mAb selected from mAb 240, 246, 248 and 421, said peptide being selected from the group consisting of:

(i) peptides, herein designated Ia-Ib, based on the CDR2 and CDR3, respectively, of the heavy chain (240VH), and peptide Ic based on the CDR3 of the light chain (240VL), of the anti-p53 mAb 240, of the sequences:

(Ia) Glu-Ile-Asp-Pro-Ser-Asp-Ser-Tyr-Thr-Asn-Tyr-Asn-Gln-Asn-Phe-Lys-Asp (SEQ ID NO:9),

(Ib) Leu-Leu-Arg-Tyr-Phe-Ala-Met-Asp-Tyr (SEQ ID NO:10),

or

(Ic) Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11);

(ii) peptides, herein designated IIa-IIb, based on the CDR2 and CDR3, respectively, of the heavy chain (246VH), and peptide IIc based on the CDR3 of the light chain (246VL), of the anti-p53 mAb 246, of the sequences:

(IIa) Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly (SEQ ID NO:12),

(IIb) Gly-Gly-Gly-Leu-Lys-Gly-Tyr-Pro-Phe-Val-Tyr (SEQ ID NO:13),

or

(IIc) Gln-Gln-Arg-Ser-Ser-Phe-Pro-Phe-Thr (SEQ ID NO:14);

(iii) peptides, herein designated IIIa-IIIb, based on the CDR2 and CDR3, respectively, of the heavy chain (248VH), and peptide IIIc based on the CDR3 of the light chain (248VL), of the anti-p53 mAb 248, of the sequences:

(IIIa) Asp-Ile-Tyr-Pro-Asn-Asn-Gly-Phe-Thr-Thr-Tyr-Asn-Gln-LysPhe-Lys-Gly (SEQ ID NO:15),

(IIIb) Ser-Gly-Ser-Arg-Phe-Asp-Tyr (SEQ ID NO:16),

or

(IIIc) Gln-Gln-Ser-Asn-Ser-Trp-Pro-Val-His-Ala (SEQ ID NO:17);

and

(iv) peptides, herein designated IVa-IVb, based on the CDR2 and CDR3, respectively, of the heavy chain (421VH),

and peptide IVc based on the CDR3 of the light chain (421VL), of the anti-p53 mAb 421, of the sequences:

(IVa) Trp-Ile-Asp-Pro-Glu-Asn-Gly-Asp-Thr-Glu-Tyr-Ala-Pro-Lys-Phe-Gln-Gly (SEQ ID NO:18),

(IVb) Tyr-Gly-Asp-Ala-Leu-Asp-Tyr (SEQ ID NO:19),

or

(IVc) Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr (SEQ ID NO:20).

5. The method according to claim 4, wherein said peptide contains a sequence selected from the group of sequences consisting of Ic (SEQ ID NO:11), IIa (SEQ ID NO:12), IIIb (SEQ ID NO:16), IIIc (SEQ ID NO:17) and IVc (SEQ ID NO:20).

6. The method according to claim 5, wherein the peptides are selected from the group consisting of peptides V-IX of the sequences:

Peptide V: Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser SEQ ID NO:21,

Peptide VI: Gly-Val-Tyr-Tyr-Cys-Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr-Phe-Gly-Ala-Gly-Thr-Lys SEQ ID NO:22,

Peptide VII: Gly-Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly-Lys-Ala SEQ ID NO:23,

Peptide VIII: Ala-Val-Tyr-Tyr-Cys-Ala-Arg-Ser-
Gly-Ser-Arg-Phe-Asp-Tyr-Trp-Gly-
Glu-Gly-Thr-Thr SEQ ID NO:24,

and

Peptide IX: Val-Tyr-Phe-Cys-Gln-Gln-Ser-Asn-
Ser-Trp-Pro-Val-His-Ala-Arg-Gly-
Gly-Gly-Thr-Lys SEQ ID NO:25.

7. The method according to claim 4, which comprises administering to a patient effective amounts of two or more different peptides based on the same or different CDRs of the same anti-p53 mAb or of different anti-p53 mAbs, either concomitantly or sequentially at different intervals.

8. A synthetic peptide capable of eliciting antibodies to p53, which peptide contains a sequence of a CDR of the heavy or light chain of an anti-p53 mAb, and salts and chemical derivatives thereof.

9. A synthetic peptide according to claim 8, containing a sequence of the CDR2 or CDR3 of the heavy chain, or of the CDR3 of the light chain, of an anti-p53 mAb selected from mAb 240, 246, 248 and 421, said peptide being selected from the group consisting of:

(i) peptides, herein designated Ia-Ib, based on the CDR2 and CDR3, respectively, of the heavy chain (240VH), and

peptide Ic based on the CDR3 of the light chain (240VL), of the anti-p53 mAb 240, of the sequences:

(Ia) Glu-Ile-Asp-Pro-Ser-Asp-Ser-Tyr-Thr-Asn-Tyr-Asn-Gln-Asn-Phe-Lys-Asp (SEQ ID NO:9),

(Ib) Leu-Leu-Arg-Tyr-Phe-Ala-Met-Asp-Tyr (SEQ ID NO:10),

or

(Ic) Gln-His-Ile-Arg-Glu-Leu-Thr-Arg (SEQ ID NO:11);

(ii) peptides, herein designated IIa-IIb, based on the CDR2 and CDR3, respectively, of the heavy chain (246VH), and peptide IIc based on the CDR3 of the light chain (246VL), of the anti-p53 mAb 246, of the sequences:

(IIa) Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly (SEQ ID NO:12),

(IIb) Gly-Gly-Gly-Leu-Lys-Gly-Tyr-Pro-Phe-Val-Tyr (SEQ ID NO:13),

or

(IIc) Gln-Gln-Arg-Ser-Ser-Phe-Pro-Phe-Thr (SEQ ID NO:14);

(iii) peptides, herein designated IIIa-IIIb, based on the CDR2 and CDR3, respectively, of the heavy chain (248VH), and peptide IIIc based on the CDR3 of the light chain (248VL), of the anti-p53 mAb 248, of the sequences:

(IIIa) Asp-Ile-Tyr-Pro-Asn-Asn-Gly-Phe-Thr-Thr-Tyr-Asn-Gln-LysPhe-Lys-Gly (SEQ ID NO:15),

(IIIb) Ser-Gly-Ser-Arg-Phe-Asp-Tyr (SEQ ID NO:16),

or

(IIIc) Gln-Gln-Ser-Asn-Ser-Trp-Pro-Val-His-

Ala (SEQ ID NO:17);

and

(iv) peptides, herein designated IVa-IVb, based on the CDR2 and CDR3, respectively, of the heavy chain (421VH), and peptide IVc based on the CDR3 of the light chain (421VL), of the anti-p53 mAb 421, of the sequences:

(IVa) Trp-Ile-Asp-Pro-Glu-Asn-Gly-Asp-Thr-

Glu-Tyr-Ala-Pro-Lys-Phe-Gln-Gly (SEQ ID NO:18),

(IVb) Tyr-Gly-Asp-Ala-Leu-Asp-Tyr (SEQ ID NO:19),

or

(IVc) Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr (SEQ ID NO:20).

10. A synthetic peptide according to claim 9, wherein the peptide contains a sequence selected from the group of sequences consisting of Ic (SEQ ID NO:11), IIa (SEQ ID NO:12), IIIb (SEQ ID NO:16), IIIc (SEQ ID NO:17) and IVc (SEQ ID NO:20).

11. A synthetic peptide according to claim 10, wherein the peptides are selected from the group consisting of peptides V-IX of the sequences:

Peptide V: Tyr-Tyr-Cys-Gln-His-Ile-Arg-Glu-Leu-Thr-Arg-Ser-Glu-Gly-Gly-Pro-Ser SEQ ID NO:21,

Peptide VI: Gly-Val-Tyr-Tyr-Cys-Trp-Gln-Gly-Thr-His-Ser-Pro-Leu-Thr-Phe-Gly-Ala-Gly-Thr-Lys SEQ ID NO:22,

Peptide VII: Gly-Asp-Ile-Asn-Pro-Asn-Asn-Gly-Tyr-Thr-Ile-Tyr-Asn-Gln-Lys-Val-Lys-Gly-Lys-Ala SEQ ID NO:23,

Peptide VIII: Ala-Val-Tyr-Tyr-Cys-Ala-Arg-Ser-Gly-Ser-Arg-Phe-Asp-Tyr-Trp-Gly-Glu-Gly-Thr-Thr SEQ ID NO:24,

and

Peptide IX: Val-Tyr-Phe-Cys-Gln-Gln-Ser-Asn-Ser-Trp-Pro-Val-His-Ala-Arg-Gly-Gly-Gly-Thr-Lys SEQ ID NO:25.